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10 **BEFORE THE**
11 **CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**

12 HEARING IN THE MATTER OF CALIFORNIA
13 DEPARTMENT OF WATER RESOURCES
14 AND UNITED STATES BUREAU OF
RECLAMATION REQUEST FOR A CHANGE
IN POINT OF DIVERSION FOR CALIFORNIA
WATER FIX

TESTIMONY OF MAUREEN SERGENT

15 I, Maureen Sergent, do hereby declare:

16 I am a Retired Annuitant employed by the Department of Water Resources (DWR).
17 Information on my education, experience and expertise, is provided in my Statement of
18 Qualifications and direct testimony. [Exhibits DWR-19 and DWR-53, pp. 1:17-2:20.]

19 **I. OVERVIEW OF TESTIMONY**

20 The purpose of my testimony is to provide evidence rebutting the claims of a number of the
21 parties opposing approval of the California WaterFix Petition for Change (CWF Petition) on
22 the grounds that:

- 23 1. The CWF Petition should be treated as an application for a new water right. I will
24 briefly review and clarify key elements of the CWF Petition before the State Water
25 Resources Control Board (State Water Board) and address arguments raised by
26 protestants.
- 27 2. The CWF Petition should be denied because the State Water Project (SWP) permits
28 have expired. I will provide information to demonstrate that this is factually incorrect.

1 3. Approval of the CWF facilities will injure other legal users of water. My testimony will
2 discuss key elements of agreements executed between DWR and diverters on the
3 Feather River as well as agencies in the Delta including the North Delta Water
4 Agency (NDWA), describing DWR's understanding of the benefits and protections
5 provided in those agreements, and DWR's compliance with those agreements. I will
6 also discuss certain claims raised by other parties in the Delta that changes in water
7 quality and water levels will injure other water users.

8 My testimony is limited to issues related to the SWP water rights and agreements.

9 **II. THE CWF PETITION DOES NOT IN EFFECT INITIATE A NEW WATER RIGHT**

10 Several parties have argued that the CWF Petition will in effect initiate a new water
11 right arguing that the petition will increase the quantities of water DWR and the Bureau of
12 Reclamation (Reclamation) are allowed to divert and that the diversion will result in a
13 change in the source of the water diverted. [Exhibits CSPA-4-Rev, pp. 4-5, Section B and
14 22-25, Section VIII; RTD-10-Rev2, pp. 5:5-25:17; AQUA-1- Rev2, p. 7, Section 3; AQUA-3-
15 Rev2, p. 5, ¶ 2; AQUA-5, p. 5.] The arguments raised by these parties misstate the request
16 contained in the CWF Petition and are factually incorrect. The CWF Petition is limited to a
17 request to add three new points of diversion/diversion to the listed permits. The petition
18 does not request a change to any other aspect of the listed permits (Exhibit SWRCB-1, p.
19 1, ¶ 1, and p. 12, Section II of Supplement to Petition for Change in Point of Diversion) and
20 is consistent with the provisions of California Water Code (CWC) Section 1701 et seq.

21 **1. Petition Does Not Change Quantities or Season of Diversion Currently**
22 **Authorized**

23 The argument that operation of the CWF will increase the amount of water that DWR
24 and Reclamation are authorized to divert misstates the facts of the petition. For example,
25 RTD argues that DWR has already put water to full beneficial use [Exhibit RTD-10-Rev2,
26 pp. 13:1-15:5.] A City of Sacramento witness claims that the CWF will add 9,000 cfs of
27 additional diversion capacity without any specific proposal to limit the use of the facilities.
28 [Exhibit CITYSAC-8, p. 5:8-10.] This is incorrect. There will be no increase in the quantities

1 the SWP and Central Valley Project (CVP) (collectively Projects) are authorized to divert
2 from any of the sources listed in the permits. The SWP is currently authorized to divert up
3 to a maximum combined rate of 10,350 cfs from the Delta by direct diversion, diversion to
4 storage and redirection of previously stored water under permits 16478, 16479, 18481, and
5 16482. [See condition 5 of the amended permits, Exhibits SWRCB-6 through SWRCB-9.]
6 The terms and conditions in the permits will continue to be applicable to the operation of
7 the proposed CWF facilities in addition to any new conditions issued by the State Water
8 Board. [Exhibit SWRCB-1, p. 19, ¶ 3 of Supplement to Petition for Change in Point of
9 Diversion.]

10 **2. PETITION DOES NOT CHANGE THE EXISTING PERMITTED SOURCE OF** 11 **WATER**

12 Contrary to the claims of several parties, the petition will not result in a change in the
13 sources of water or rates of diversion from what is currently authorized in the permits. RTD
14 erroneously argues that a change in the proportion of water exported at the Banks Pumping
15 Plant that might originate in any particular tributary to the Delta (source fingerprinting)
16 means that the source of the water to be diverted through the CWF would be different than
17 that currently diverted. [Exhibit RTD-10 rev2, pp. 6:12-8:22.] RTD testimony misrepresents
18 the DWR testimony and the provisions of the existing permits by confusing information on
19 the source fingerprinting of water at a specific location within the Delta channels and what
20 DWR and Reclamation are currently authorized to divert under the existing permits. SWP
21 water diverted through the new facilities would be limited to direct diversion of water
22 available on the Feather River, excess flow available in the Delta or redirection of water
23 previously stored in Lake Oroville, as is currently authorized in the existing permits. Since
24 the SWP permits were originally issued in 1972, DWR has been authorized to divert water
25 from these sources in the vicinity of Hood in the north Delta (identified as the Delta Water
26 Facilities), as discussed below. [Exhibits SWRCB-6 through SWRCB-9, condition 2 of the
27 amended permits.]
28

- 1 • Permit 16748. The source of water diverted under water rights Permit 16478 is the
2 Feather River. The authorized points of diversion include the Oroville/Thermalito
3 complex as well as three locations in the Delta, Clifton Court Forebay, Tracy
4 Pumping Plant and the Delta Water Facilities point of diversion near Hood. [Exhibit
5 SWRCB-6, Provisions 1 and 2 of the Amended Permit.] Direct diversion is limited to
6 the quantity that is available at Oroville Dam (up to 1,400 cfs). [Exhibit SWRCB-6,
7 Provision 5 of the Amended Permit.] Inclusion of the Delta Water Facilities as a point
8 of diversion as well as a point of rediversion, shows the clear intent to allow direct
9 diversion of water originating in the Feather River at the Hood location.
- 10 • Permit 16479. This water rights permit authorizes diversion of water from both the
11 Feather River and the Delta channels. The authorized points of diversion are the
12 same as those in Permit 16478. [Exhibit SWRCB-7, Provisions 1 and 2 of the
13 Amended Permit.]
- 14 • The source of water in Permits 16481 and 16482 includes the Delta channels,
15 identified as Italian Slough and the Sacramento-San Joaquin Delta channels. Both
16 permits list the Delta Water Facilities as an authorized point of diversion. Clearly the
17 State Water Board considered the Sacramento River at the Delta Water Facilities to
18 be within the Delta channels. Otherwise, the Delta Water Facilities would not have
19 been listed as an authorized point of diversion in 1972. [Exhibits SWRCB-8 and
20 SWRCB-9, Provisions 1 and 2 of the Amended Permits]

21 Other parties have also incorrectly claimed that operation of the CWF facilities will add a
22 new source of water as a result of providing capacity for new water transfers. [Exhibits
23 CSPA-4 revised, p. 19, ¶ 3; AQUA-1- Rev2, p. 7, ¶ 1; AQUA-5, p. 5, ¶ 1; AQUA-3- Rev2, p.
24 5, ¶ 2; RTD-10-Rev2, pp. 8:27-9:2.] Conveyance of non-Project transfer water does not
25 increase or decrease the quantity of water DWR or Reclamation are authorized to divert
26 under the permits at issue in this hearing. In addition, approval of the CWF Petition will not
27 authorize any new water transfers. Any future transfer proposing to use the CWF facilities
28 to convey transfer water will require the approval of the State Water Board and/or

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1 compliance with the California Environmental Quality Act.

2 **3. EXISTING DWR PERMITS CLEARLY INCLUDE A NORTH DELTA POINT OF**
3 **DIVERSION**

4 Restore the Delta (RTD) argues that the CWF Petition should be denied in favor of
5 requiring a petition for a new water right because the proposed diversions are not currently
6 authorized in the SWP permits or included in the SWP authorizing legislation. [Exhibit
7 RTD-10- Rev2, p. 5:18-25.] The argument is factually incorrect and irrelevant. The SWP
8 permits and the maps submitted with the permit applications, which are filed with the State
9 Water Board (as referenced in CWF Petition), clearly show the point of diversion at Hood
10 and an isolated facility from Hood to Clifton Court Forebay. In fact later in his testimony,
11 Mr. Stroshane acknowledges that the Hood point of diversion and the Peripheral Canal are
12 listed in the permits. [Exhibit RTD-10-Rev2, p. 11:13-23.] Even if the north Delta diversion
13 were not included in the existing permits, CWC section 1701 allows the State Water Board
14 to approve the request of an applicant, permittee or licensee to change a point of diversion if
15 it can make the required findings.

16 The information provided by DWR and Reclamation in this hearing demonstrates that
17 the CWF Petition is consistent with CWC Section 1701 and will not in effect initiate a new
18 water right.

19 **III. THE SWP PERMITS HAVE NOT EXPIRED**

20 The California Sportfishing Protection Alliance (CSPA) has claimed that the SWP
21 permits have expired. [Exhibit CSPA-4 revised, p. 4, Section B, ¶ 1.] However, the State
22 Water Board has not revoked the SWP permits at issue and DWR continues to operate the
23 SWP consistent with the terms and conditions contained in the permits. CSPA witness Mr.
24 Shutes also argues that the Hood point of diversion became moot when the Peripheral
25 Canal was defeated by the voters. [Exhibit CSPA-4 revised, p. 24, ¶ 4.] Mr. Shutes is
26 incorrect. The public vote related to the Peripheral Canal had no effect on the authorized
27 points of diversion in the SWP permits.

28 RTD argues that for purposes of water rights licensing, the SWP project is now

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1 complete, water has been put to full beneficial use, DWR has failed to show due diligence,
2 approval of the petition would result in "cold storage" of water and, as a consequence, no
3 good cause exists to support DWR's December 31, 2009, Petition for Time Extension for
4 the SWP permits included in the CWF Petition. [Exhibit RTD-10-Rev2, pp. 13:1-19:20.]
5 RTD argues that without an extension of time, the CWF Petition should be denied and a
6 new water right application required. [Exhibit RTD-10-rev2, p. 9:9-16.] DWR strongly
7 disagrees. RTD raised similar arguments in its formal protest of DWR's Petition for
8 Extension of Time and DWR addressed each of these issues in detail in its response letter.
9 (See Exhibit RTD-120, DWR's Feb, 10, 2011 letter in response to CWIN and AquAlliance's
10 Formal Protest of DWR's Petition for Extension of Time of SWP water right permits.) As
11 explained in DWR's February 2011 letter, the RTD assertions are factually incorrect and
12 misrepresent the information provided in the Petition for Extension of Time, the SWP level
13 of development, expectation of future development, and the use of water under its permits.
14 [See Exhibit RTD-118, Supplement p. 3-5 of DWR's Petition for Extension of Time, dated
15 Dec. 31, 2009; Exhibit RTD-120, p. 5-7.] The SWP is not complete and DWR has not yet
16 made full beneficial use of the water authorized under the existing permits. [Exhibit RTD-
17 118.] DWR has worked diligently to complete construction of the SWP facilities necessary
18 to allow full beneficial use, including the East Branch Extension currently under
19 construction, and pursue the north Delta diversion. [Exhibit RTD-118, Supplement p. 5-6.]
20 Although DWR stated in its Petition for Extension of Time that it did not expect diversions or
21 demand to exceed the historic maximum amounts over the short five-year term of the
22 requested time extension, DWR has not yet delivered the full contract amounts and has
23 clearly stated that demand is expected to grow in the future. [Exhibit RTD 118, Supplement
24 p. 3-7.] As stated in the Petition for Extension of Time, the information contained in the
25 CWF Final EIR/EIS will be used to more clearly define the time, facilities, and operations
26 necessary to maximize the beneficial use of water. [Exhibits RTD-118, Supplement p. 3-4,
27 ¶ 9 and 11; RTD-120, p. 5-6.] DWR's Petition for Extension of Time will be addressed in a
28 separate process and was not noticed as a topic to be addressed in this proceeding before

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1 the Board.

2 **IV. OPERATION OF THE CWF WILL NOT INJURE OTHER LEGAL USERS**

3 In this section I will discuss issues raised with respect to potential injury to other
4 legal users of water. Many different parties both upstream of the Delta and within the Delta
5 have claimed that operation of the CWF facilities will result in injury to their water rights as
6 a result of changes in upstream storage, Delta water quality, and Delta channel water
7 levels. I will review key elements of agreements executed between DWR and diverters on
8 the Feather River as well as agencies in the Delta, describing DWR's understanding of the
9 benefits and protections provided in those agreements, and DWR's compliance with those
10 agreements. I will then discuss some of the claims made by other diverters in the Delta
11 and provide information to demonstrate that a change in water quality or water levels alone
12 is not sufficient to support a claim of injury. The discussions in this section regarding
13 DWR's agreements are based my understanding of the provisions contained in those
14 agreements developed through my experience working with those agreements.

15 **1. FEATHER RIVER CONTRACTS**

16 Diverters that have Settlement Contracts with DWR for diversion from the Feather
17 River downstream of Oroville Dam have claimed that operation of the CWF facilities will
18 result in injury to their water rights. [Exhibits BWGWD-1, p. 5:22-24; MLF-30, p. 2:13-15;
19 MLF-40, p. 3:5-7; MLF-50, p. 2:19-21; MLF-51, p. 2:16-18; MLF-55, p. 3:5-7.] When
20 evaluating the claim of injury due to the operation of the CWF facilities, it is important to
21 review the underlying rights of the Settlement Contractors, the contracts executed between
22 DWR and each of the Settlement Contractors, and how DWR operates to provide water to
23 the contractor under those agreements.

24 It is my understanding that the underlying rights of the Settlement Contractors are
25 based on direct diversion as shown in the water right permits submitted as part of this
26 hearing. [October 25, 2016 CWF Transcript Vol. 22, p. 34:14-16; Exhibits MLF-30, pp. 1:28-
27 2:2; MLF-32; MLF-50, p. 2:2-6; MLF-51, p. 1:27-2:3; MLF-55, p.2:12-16; MLF 60-61;
28 BWGWD-1, p. 3:13-14.] The underlying direct diversion rights do not entitle the diverters to

1 an amount of water in excess of what would be available at their respective authorized
2 points of diversion. The deliveries of water greater than what might otherwise be available
3 by direct diversion are a result of contractual water supplies rather than individually held
4 water rights.

5 As described in my direct testimony [Exhibit DWR-53, Section VII.B.i.], DWR
6 executed water right settlement agreements with six agencies on the Feather River
7 downstream of Lake Oroville to resolve protests related to DWR's original applications to
8 appropriate water from the Feather River. These agencies include the Joint Water Districts
9 Board (consisting of Biggs-West Gridley Water District, Butte Water District, Richvale
10 Irrigation District, and Sutter Extension Water District), Western Canal Water District,
11 Garden Highway Mutual Water Company, Plumas Mutual Water Company, Tudor Mutual
12 Water Company, and Oswald Water District. The agreements are attached as Exhibits
13 DWR-314; DWR-315; DWR-318; DWR-321; DWR-323; DWR-325; DWR-326; DWR-329. I
14 understand that the Settlement Agreements specify defined water supplies and the
15 conditions under which deliveries to the Settlement Contractors can be reduced. The CWF
16 Petition does not alter any of the provisions of those agreements. While the Settlement
17 Agreements provide for a defined water supply, they do not create a right to Oroville
18 Storage. Under cross examination, the Feather River Settlement Contractor witnesses
19 acknowledged that the agreements do not convey a right to a specific level of Lake Oroville
20 Storage. [October 25, 2016 CWF Transcript Vol. 22, p. 48:9-13, p. 52:18-24, pp. 54:17-
21 55:6, p. 58:5-14, pp. 68:15-69:2.]

22 DWR operates to meet the demands of the Settlement Contractors pursuant to their
23 contracts and will continue to do so. As stated in Mr. Leahigh's direct testimony [Exhibit
24 DWR-61, p. 4:1-5.], DWR determines the amount of water required to meet these
25 contractual obligations before determining how much water can be allocated to SWP
26 contractors. The modeling conducted by DWR shows that under all CWF scenarios, the
27 demands of the Settlement Contractors are met in all year types. The Settlement
28 Contractors have referred to the testimony of Mr. Water Bourez of MBK Engineers to

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1 support their claim of injury. [Exhibits BWGWD-1, p. 5:20-24; MLF-30, p. 2:13-15, MLF-40,
2 p. 3:5-7; MLF-50, p. 2:19-21; MLF-51, pp. 2:16-18; MLF-55, p.3:5-7.] However, the results
3 of the modeling conducted by MBK also show that the demands of the Settlement
4 Contractors are met under all CWF scenarios. The Feather River Service Agreement
5 deliveries in Calsim II are prioritized in a manner that is consistent with DWR's
6 management of Oroville Operations. [October 20, 2016 CWF Transcript Vol. 20, p. 58:11-
7 18, p. 105:19-23, p. 158:7-12; Exhibit SVWU-110, p. 25.] Due to a change in modeling
8 assumptions made by Mr. Bourez, there were some changes to Lake Oroville end of
9 season storage, however those changes did not affect the amount of water delivered to the
10 Settlement Contractors. [Id.; Exhibit SVWU-110, p. 36, October 21, 2016 CWF Transcript
11 Vol. 21, p. 4:2-24, p. 58:18-25, p. 59:14-22.] The discretionary changes in Oroville storage
12 would affect allocations to SWP contractors in subsequent years rather than the Settlement
13 Contractors. DWR is committed to continuing to meet its obligations under the Settlement
14 Agreements as it has done historically.

15 2. NDWA AGREEMENT

16 A number of parties that divert water from the north Delta initially testified that they
17 believe they will be injured by the operation of the CWF facilities and that the existing
18 settlement agreement between DWR and the NDWA will not protect them from the claimed
19 injury. [Exhibit NDWA-7, p. 8, ¶ 24.] Concerns were expressed primarily regarding potential
20 impacts during drought periods. These claims were, in some cases, qualified or retracted.
21 [October 28, 2016 CWF Transcript Vol. 25, p. 92:14-17, p. 93:9-14.] The purpose of this
22 portion of my testimony is to describe DWR's understanding of the benefits and protections
23 provided by the NDWA Agreement. The most substantial benefits of the Agreement occur
24 in the dryer year types, particularly during critically dry years. The experience of the most
25 recent critical drought period of 2013 through 2015 can be used to demonstrate how the
26 provisions of those agreements protect the diverters within NDWA.

27 The NDWA Agreement was explicitly designed to protect diverters within the NDWA
28 from flow and water quality related changes due to diversions of water from the Delta by

1 the State Water Resources Development System, as well as to provide substantial benefits
2 to diverters within NDWA. [Exhibit DWR-306, Recital (a).] In consideration of the benefits
3 contained in the NDWA Agreement, NDWA consents to the export of SWP water from the
4 Delta, as long as the agreement is in full force and effect and DWR is in compliance with
5 the agreement. [Exhibit DWR-306, Article 8(e).] The NDWA Agreement remains in effect
6 and DWR complies with its terms. The protections apply to current and future SWP
7 operations.

8 The agreement covers all diversions by the SWP which is defined in the agreement
9 as the State Water Resources Development System [Exhibit DWR-306, Article 1(g).], CWC
10 Section 12931, which includes a through Delta facility and appurtenances. In fact, the
11 NDWA Agreement was executed, and NDWA consented to operation of the SWP, at the
12 time the Peripheral Canal was being proposed by DWR with a diversion capacity of up to
13 21,800 cfs [DWR Bulletin 132-81, pp. 6-7¹], over twice the current proposed CWF capacity.
14 [October 28, 2016 CWF Transcript, Vol. 25, p. 149:17-21.] As discussed in section II.2
15 above, the Delta Water Facilities point of diversion near Hood was included in the four
16 SWP permits listed in the CWF Petition at the time they were issued and when the NDWA
17 Agreement was executed. The proposed points of diversion are in the same general area
18 as the currently authorized Delta Water Facilities.

19 **a. Relevant NDWA Agreement Provisions**

20 The NDWA Agreement contains several provisions specifically designed to protect
21 the water quality and water levels within the north Delta. Article 2 of the NDWA Agreement
22 provides that DWR shall maintain water quality the better of the State Water Board
23 objectives or those contained in the Agreement. The compliance locations contained in the
24 Agreement are located near the southern boundary of NDWA and include the Sacramento
25 River at Three Mile Slough, as amended in 1997, and Rio Vista, the San Joaquin River at
26 San Andreas Landing, and the Mokelumne River at Terminous as well as several interior

27 ¹ Available at http://www.water.ca.gov/swpao/bulletin_home.cfm
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1 locations including Steamboat Slough, Walnut Grove and the North Fork of the Mokelumne
2 River. [Exhibit NDWA-12, NDWA Agreement 1997 Amendment.] The NDWA Agreement
3 Article 2(b) states that DWR agrees not to alter Delta hydraulics from what would be
4 available absent SWP operations so as "to cause a measurable adverse change in ocean
5 salinity gradient or relationship among the various monitoring locations shown on
6 Attachment B and interior points upstream from those locations, with any particular flow
7 past Emmaton." [Exhibit DWR-306, p. 2.] However, by the terms of the Agreement, NDWA
8 agrees that DWR is not obligated to provide water quality any better than that specified in
9 the Agreement. [Exhibit DWR-306, p.3-4, Articles 2 and 8.]

10 Mr. Slater pointed to issues experienced in the recent drought to claim similar injury
11 would occur due to changes in water quality and water surface elevations by allowing SWP
12 and CVP diversions from the north Delta as opposed to limiting diversions to the existing
13 points of diversion in the southern Delta. [Exhibit NDWA-10, pp. 3:27- 4:5.] The NDWA
14 Agreement remains protective even in dry year types. The Agreement recognizes the
15 variability of the water quality in the Delta during dryer year types [Exhibit DWR-306, Article
16 4], including recognition that during certain critically dry periods it may not be possible to
17 meet the objectives at the compliance locations and setting forth a process for monetary
18 compensation during these infrequent periods. NDWA Agreement Article 4 outlines the
19 conditions that constitute a drought emergency and during such emergency the conditions
20 that prevail during the period of the emergency. [Exhibit DWR-306, p. 2.] Article 4(b)(iv) of
21 the Agreement provides that DWR shall compensate diverters within the NDWA for crop
22 losses in areas where the water quality objectives in the Agreement are not met. The
23 drought emergency provisions were in effect during 2015. Even during the historically dry
24 conditions of the most recent drought period of 2013 through 2015, the water quality criteria
25 were met at all NDWA compliance locations with the exception of Three Mile Slough.
26 [Exhibit NDWA-3, p. 9:5-10.] The NDWA growers diverting from areas where the water
27 quality objectives were not met (those diverting from the Sacramento River between Three
28 Mile Slough and Rio Vista) were compensated consistent with the terms of the NDWA

1 Agreement.

2 The scope of the NDWA Agreement and the commitment of both parties is outlined
3 in Article 8 of the Agreement. Article 8(a)(i) provides that the Agreement is the full and sole
4 agreement between DWR and NDWA as to the water quality to which NDWA diverters are
5 entitled and NDWA payments for assurance of a dependable water supply. In Article
6 8(a)(ii) DWR recognizes the right of diverters within NDWA to divert from Delta channels,
7 and provides that DWR shall furnish water to the extent it is not otherwise available under
8 the water rights of water users. This provision provided substantial benefits to diverters
9 within the NDWA in 2014 and 2015 when the State Water Board curtailed the water rights
10 of many diverters. The existence of the Agreement allowed all diverters within NDWA to
11 continue diverting pursuant to the contract to meet their full demand even in the case where
12 their underlying water rights had been curtailed. Article 8 also contains the specific
13 commitments made by NDWA in consideration of the benefits of the Agreement: 1) NDWA
14 agreed not to claim any right against DWR in conflict with the provisions of Agreement
15 (Article 8(a)(iii)), 2) *NDWA agreed to defend affirmatively as reasonable and beneficial the*
16 *water qualities established in the contract* [(Article 8(d); (October 28, 2016 CWF Transcript
17 Vol. 25, p. 100:14-20.), and 3)] *NDWA consented to the State's export of water from the*
18 *Delta* so long as the contract is in full force and effect [(Article 8(e)). October 28, 2016 CWF
19 Transcript Vol. 25, pp. 100:23-101:6.]] As acknowledged by Ms. Melinda Terry of NDWA,
20 the Agreement remains in full force and effect. [Exhibit NDWA-7, p. 6:2.]

21 Article 6 of the NDWA Agreement provides protections to those within NDWA from
22 detrimental changes to the natural flow in the Delta channels due to the conveyance of
23 water from the Delta through the SWP facilities. Under the Agreement DWR agreed not to
24 convey SWP water so as to cause a decrease or increase in the natural flow, or reversal of
25 the natural flow direction, or to cause the water surface elevation in the Delta channels to
26 be altered to the detriment of the channels or users within the NDWA. A number of parties
27 expressed concerns about the potential changes in water surface elevations during dry
28 periods. [Exhibits NDWA-9, p. 3:11-12, pp. 10:15-11:6, NDWA-10, p. 3:12-16.] DWR's

1 CWF modeling shows that while there will be some changes in the water surface elevations
2 in the vicinity of the new intakes, the most significant changes will occur at high flows and
3 the fluctuations will remain within the typical range of historic fluctuations within the Delta
4 channels [Exhibit DWR-66, p. 9, Section VII.] Mr. Mello acknowledges in his testimony that
5 the diversion systems within NDWA are designed with historic water surface elevations as
6 a baseline. [Exhibit NDWA-9, p. 6:6-7; October 25, 2016 CWF Transcript Vol. 25, p. 46:16-
7 18.]

8 It is important to note that during most dry periods, DWR and Reclamation make
9 "supplemental storage releases" (Term 91 period) and those supplemental storage
10 releases improve water quality and increase the water surface elevations in the Delta
11 channels in the area of the proposed north Delta diversions above what would occur absent
12 Project operations. During the entire period in which Term 91 is in effect, the quantities of
13 water diverted by DWR and Reclamation are less than the quantities of water released
14 from upstream Project storage. Diversions at the CWF facilities during the Term 91 period
15 would not reduce the amount of natural flow or lower the water surface elevations below
16 what would otherwise exist in the north Delta. In all but the wettest years, Term 91 is in
17 effect for significant portions for the irrigation season. During the drier year types, Term 91
18 is in effect for the majority of the typical irrigation season. The table below shows the Term
19 91 periods for the recent 2013 through 2015 drought. In 2015, Term 91 was in effect from
20 April 30 through mid-December and during this entire period, flows, water quality and water
21 surface elevations within the north Delta were improved by Project storage releases.
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Year	Term 91	Official Year Classification		No. Days
		Sac R	San Joaquin	
2013	5/7-9/20 10/30-12/31	Dry	Critical	200
2014	1/1-2/10 5/20-11/26	Critical	Critical	232
2015	4/30-12/15	Critical	Critical	230

Source: State Water Board Records

The NDWA Agreement was negotiated and executed at the time the Peripheral Canal was being proposed and it was considered to be a settlement with respect to the impacts of that facility. As was noted above, Mr. Mellow, a NDWA witness, acknowledged that the Agreement was a settlement that mitigated the impacts of the Peripheral Canal. [October 28, 2016 CWF Transcript Vol. 25, p. 149:17-21.] The diversion capacity of the proposed CWF facilities is less than half that of the Peripheral Canal and potential impacts to water levels in the area of the north Delta diversions would not exceed those expected with operation of the Peripheral Canal. Given the relative location of the proposed points of diversion and the capacity of the CWF facilities as compared to the Peripheral Canal, it is reasonable to conclude that the provisions of Article 6 of the 1981 Agreement cover the State's obligations regarding changes in natural flow and changes in water surface elevations as they did when the 1981 Agreement was executed.

b. History of Compliance with NDWA Agreement

DWR has been very successful in meeting the water quality objectives specified in the Agreement. A review of the available water quality records shows that the only exceedences of the objectives have occurred at the Emmaton/Three Mile Slough compliance location. Exceedences of the objectives at Emmaton (before 1997) and Three

1 Mile Slough (from 1997, when the NDWA Agreement was amended to change the
2 compliance location, to the present) have primarily occurred during critically dry periods.
3 Even in the recent historically dry period from 2013 through 2015, the water quality criteria
4 at all locations specified in the Agreement were met with the exception of Three Mile
5 Slough. The NDWA service area affected was limited to those diverting from the portion of
6 the Sacramento River between Three Mile Slough and Rio Vista. As was noted above, the
7 emergency provisions of the NDWA Agreement were in effect and DWR was in compliance
8 with the Agreement.

9 Although the water quality criteria in the Agreement for Emmaton/Three Mile Slough
10 were exceeded, the observed water quality remained significantly better than what would
11 have existed in the absence of the substantial SWP and CVP storage releases made
12 during those periods to maintain water quality in the Delta. A review of historic water
13 quality at this location illustrates the substantial benefit provided to diverters within the
14 NDWA during critically dry periods as a result of the operations of the SWP and CVP. The
15 1931 Water Supervisors Report [Exhibit DWR-322.] includes water quality data for both
16 Emmaton and Rio Vista (reported in parts Chloride per 100,000 and converted to EC using
17 the equations contained in Exhibit DWR-316) for much of 1931, a critically dry year before
18 either the SWP or CVP facilities were constructed. For the purpose of providing a general
19 comparison, the values from the 1931 Water Supervisors Report, found at Table 90, pages
20 174 through 193 can be compared to observed data from the California Data Exchange
21 Center (CDEC) for similar locations in 2015. [Exhibit DWR-650².] By mid-June 1931, the
22 EC at Emmaton had reached approximately 8 mmhos/cm and peaked at approximately 30
23 mmhos/cm at the beginning of September. The EC at Emmaton remained above 10
24 mmhos/cm until late October. In 2015 during the primary irrigation season, the maximum
25 daily EC at Emmation was approximately 6.5 mmhos/cm in July. The EC at Rio Vista in

26 ² DWR Exhibit 650 is a true and correct copy of the document. The salinity units in CDEC are reported in
27 microSiemens/cm (uS/cm) or micro-mhos/cm (umhos/cm), which are equivalent units expressing Electrical Conductivity
28 (EC). [Exhibit DWR 316, p.10 Conversion Factors; DWR-53, p. 14, FN 13.] To convert umhos in CDEC data to mmhos
discussed in this testimony, divide umhos by 1000.

1 1931 exceeded 1.0 in mid-June, peaked at approximately 27 mmhos/cm at the beginning of
2 September and remained above 1.0 mmhos/cm until late November. In 2015 the maximum
3 daily EC at Rio Vista Bridge exceeded 1.0 for only 8 days during the primary irrigation
4 season of April through September and only reached a maximum of approximately 1.2
5 mmhos/cm.

6 The provisions of the NDWA Agreement discussed above and a review of the
7 compliance with the terms of the agreement demonstrates that the NDWA Agreement
8 remains in effect, DWR is complying with the Agreement, and the diverters within the
9 NDWA derive significant benefits from the Agreement. Consistent with the terms of the
10 Agreement, NDWA consents to the diversions of the SWP from the Delta.

11 3. CITY OF BRENTWOOD

12 The City of Brentwood (Brentwood) has claimed that the CWF operations will cause
13 a degradation in Delta water quality resulting in increased water treatment costs, difficulty
14 meeting wastewater treatment objectives and a need to purchase additional water from the
15 Contra Costa Water District (CCWD). [Exhibit Brentwood-001, 3:17-5:11.] DWR disagrees
16 that there will be a significant change in water quality at the locations where water is
17 diverted for Brentwood and that it has a responsibility to provide Brentwood with water of
18 better quality than that specified in the agreements under which Brentwood diverts water.

19 It is my understanding that Brentwood currently does not hold any individual
20 underlying water rights. Brentwood's primary water supply is diverted under the provisions
21 of the 1981 agreement between DWR and the East Contra Costa Irrigation District (ECCID,
22 1981 Agreement), and the 1991 DWR-ECCID- CCWD (1991 Agreement, collectively
23 ECCID Agreements), as both were amended in 2000. [Exhibits DWR-305; DWR-327;
24 DWR-328.] The water is pumped by CCWD for delivery to Brentwood. [Exhibit Brentwood-
25 001, p. 2:1-20.] The ECCID Agreements contain water quality criteria that must be met at
26 Old River at Indian Slough.

27 ECCID is an agricultural district with pre-1914 water rights. Attachment B of the
28 1981 Agreement specifies the water quality criteria that must be met April through October

1 to protect the agricultural uses within the District. Some areas within ECCID's service area
2 have changed from agricultural use to municipal use. ECCID does not provide municipal
3 supply. After execution of the 1981 Agreement, ECCID and CCWD requested that DWR
4 allow CCWD to divert water available under the 1981 Agreement at its Rock Slough facility
5 in order to serve municipal uses within the ECCID service area. DWR agreed to the
6 request on the condition that the diversions would not result in any additional water supply
7 cost or require that DWR maintain water quality better than that provided for in the 1981
8 Agreement. Article 2 of the 1991 Agreement [Exhibit DWR-327.] provides that:

9 DWR consents to the diversion of water under the DWR - ECCID contract at the
10 Rock Slough intake of the Contra Costa Canal for treatment by CCWD and service
11 to municipal and industrial users within the service area of East Contra Costa
12 Irrigation District as shown on Attachment A to the DWR - ECCID Contract under
13 the following conditions but only so long as the conditions are complied with:

14 a. The DWR - ECCID contract remains in effect.

15 b. The water quality criteria established by the DWR - ECCID contract for Indian
16 Slough at Old River are not made better than current levels

17 ...

18 f. The diversion of water by CCWD under the DWR - ECCID contract at the Rock
19 Slough intake to the Contra Costa Canal does not result in a greater measurable
20 water burden on the State Water Project and its operations than would have existed
21 if the water were used solely for agricultural purposes within ECCID and if the water
22 were diverted at the ECCID diversion facility on Indian Slough.

23 j. Rights to compensation under the DWR - ECCID contract for losses due to
24 lowered water quality during drought or other emergencies shall be limited to
25 economic losses suffered by agricultural users within the service area of ECCID.

26 [Exhibit DWR-327.]

27 Both ECCID Agreements were amended in 2000 to also allow diversions by CCWD at
28 the Los Vaqueros Intake, but the restrictions listed above in the 1991 Agreement remain.

1 [Exhibit DWR-328.] Brentwood is now arguing that it has a right to water quality at the
2 CCWD Rock Slough diversion better than that provided for in the ECCID Agreements.
3 Although operation of the Projects at times provides water quality better than that required
4 in the ECCID Agreements and better than that required in D-1641, DWR has no obligation
5 to maintain water quality for ECCID and Brentwood better than that provided for in the
6 ECCID Agreements. The ECCID Agreements provide substantial benefits to Brentwood.
7 The ECCID Agreements allow diversions for municipal use within the ECCID service area
8 during periods outside ECCID's historic agricultural diversion season and during periods
9 when the water right of ECCID is curtailed, as was the case for much of 2015. [Exhibit
10 DWR-305, p. 10, Section 6(a).ii.] In the absence of the benefits provided by the ECCID
11 Agreements, Brentwood would be required to apply for an individual water right which
12 would include Term 91 requiring a substitute supply during Term 91 periods, such as
13 increasing its groundwater supplies or purchasing surface water from another source.

14 The ECCID Agreements remains in effect. ECCID has not protested the CWF
15 application and is not claiming any rights in excess of those provided for in the ECCID
16 Agreements. The DWR modeling conducted for the CWF demonstrates that the operation
17 of the CWF facilities will not result in significant degradation of the water quality at the
18 CCWD point of diversion. [Exhibit DWR-513, pp 4 and 9.] DWR will continue to operate to
19 meet the commitments in the ECCID Agreements as it has historically. Thus, given the
20 modeling results for the CWF and the fact that DWR will continue to meet the terms of the
21 ECCID Agreements, Brentwood does not appear to have any contractual basis to support
22 its suggested claim of injury related to CWF operations.

23 4. CITY OF ANTIOCH

24 The City of Antioch (Antioch) has claimed that operation of the CWF facilities will
25 result in a reduction in the number of days water of suitable quality will be available at
26 Antioch's point of diversion causing increased costs to purchase additional supplies from
27 CCWD. [Exhibit Antioch-100, p.3:2-9; p. 8:11-13.] In 1968, DWR and the City of Antioch
28 (Antioch) entered into an agreement to address potential issues associated with the

1 operation of the SWP. [Exhibit DWR-304.] The Antioch Agreement was amended in 2013.
2 [Exhibit DWR-310, 2013 Amendment.] Antioch claims that the Agreement was executed to
3 partially mitigate for the impacts of the operation of the SWP. [Exhibit Antioch-100, p. 6:21-
4 23.] Antioch's testimony misrepresents the Antioch Agreement because the Agreement
5 was executed to reimburse Antioch for the decrease in the availability of usable river water
6 caused by the operation of the SWP, and not as a partial reimbursement as suggested by
7 Antioch. [Exhibit DWR-304, pp. 2-3 Article 2.] The Agreement recognizes that there are
8 factors other than the operation of the SWP that affect the availability of water for diversion
9 at the Antioch point of diversion. Page 2 of the Antioch Agreement provides

10 "WHEREAS, in the future the average number of days per year that usable river
11 water will be available to the City will be caused to decrease, and such decrease will
12 be due *in part* to operation of the State Water Resources Development System, as
13 defined in Section 12931 of the water Code. (emphasis added)

14 [Exhibit DWR-304.]

15 In fact, one of Antioch's own witnesses stated that substantial water quality
16 degradation had occurred due to upstream development between 1920 and 1960, before
17 the SWP was developed. [Exhibit Antioch-200, pp. 3:28-4:8.] During the negotiation of the
18 Antioch Agreement, the parties agreed that operation of the SWP would be responsible for
19 one-third of the total reduction in the number of days that water of suitable quality would be
20 available at Antioch's pumping plant. The State's responsibility for one-third of the
21 reduction in days is represented in the Agreement by the formula for calculating the
22 quantity of City's water deficiency entitlement. [Exhibit DWR-304, p. 3, Article 3.] Article 6
23 of the Agreement specifies the payment to be made for the purchase of the substitute water
24 supply attributable to SWP operations, compensating Antioch for the potential impacts of
25 the SWP operations. [Exhibit DWR-304, p. 5.]

26 The Water Resources Development System as defined above in the Antioch
27 Agreement and described in the Water Code includes a through Delta conveyance system.
28 The Peripheral Canal was a component of the original SWP at the time the Agreement was

1 negotiated and was included in the SWP permits when they were issued in 1972.
2 Compensation for the impacts of the SWP were negotiated between the parties and
3 described in Articles 2 through 5 of the Antioch Agreement. Article 7 of the Antioch
4 Agreement states

5 The City in consideration of the payments by the State herein provided, releases the
6 State from any liability due to any change in regimen of flows of water in the Delta or
7 the San Joaquin River and the effects of such changes caused by operation of the
8 State Water Resources Development System.

9 [Exhibit DWR-304, pp. 5-6, Article 7.]

10 Antioch has also claimed that the Agreement expires in 2028 and after that time,
11 there will be no protections for the City. [Exhibit Antioch-100, p. 7:19-23.] The Agreement
12 does not have a fixed term which will expire in 2028. The Antioch Agreement remains in
13 effect indefinitely until terminated by either party with a minimum of at least 12 month
14 notice. No party can terminate the agreement *earlier* than the date specified in the
15 amended Agreement, which is September 30, 2028. Article 1 of the original 1968
16 Agreement provided:

17 The term of this agreement shall begin on the first day of October 1968, and shall
18 continue in effect until terminated by either party by written notice to the other party
19 given at least 12 months prior to the effective date of such termination. The effective
20 date of termination shall be the last day of a year (September 30) and no termination
21 shall be effective prior to September 30, 2008.

22 [Exhibit DWR-304, p. 2, Article 1.]

23 The Antioch Agreement remained in effect after September 30, 2008 and DWR
24 continued to comply with the terms of the Agreement. By mutual consent, the Antioch
25 Agreement was amended in 2013 to extend the first potential termination date to
26 September 30, 2028. DWR has consistently stated it will continue to meet the terms of the
27 Antioch Agreement.

28 To support its claim of injury, Antioch points to DWR's modeling results for the

1 Boundary 1 analysis [Exhibits Antioch-100, p. 6:1-2; Antioch-200, p.5:26-28; Antioch-202
2 Errata, p. 37-40, Section 8.1.] to conclude there will be a significant impact in nearly all
3 months of nearly all years. However, DWR's modeling analysis for the proposed CWF
4 Project of scenarios Alternative 4A, H3 and H4 shows that the water quality at the Antioch
5 point of diversion would actually improve on average as a result of the operation of the
6 CWF facilities. [See Rebuttal Testimony of Dr. Nader-Tehrani, Exhibit DWR-79.] The
7 operation of the CWF facilities will not result in injury to Antioch. The Antioch Agreement
8 remains in effect and DWR will continue to meet terms and conditions of the agreement.

9 **5. OTHER DELTA DIVERTERS**

10 Several parties in the Delta have claimed that operation of the CWF will result in
11 injuries to their water rights primarily during dry periods. The claims of injury are based on
12 changes in the water quality and water levels. [Exhibits Land-20, p.1:21-25 and p. 2:3-8;
13 Land-25-revised, p. 3:12-21; SCDA-60-Errata, pp.11:24-12:4; CSPA-2-Revised-2, p. 30,
14 Section X.] Specifically, several parties have referred to potential increases in salinity to
15 support a claim of injury due to the operation of the CWF facilities. [Exhibits NDWA-9, p.
16 10:3-5; NDWA-3, p.13:1-7; SCDA-60 errata pp. 11:23-12:28; CSPA-2-Revised-2, pp. 8-10.]

17 Demonstration of a change in water quality alone is not sufficient to support a claim
18 of injury to an individual's water rights. If DWR and Reclamation are operating the Projects
19 such that the water quality objectives in D-1641 are being met, the Projects are not
20 obligated to further improve the water quality, or water levels, even if prior Project
21 operations, such as any particular level of storage releases or operation of the Delta Cross
22 Channel, resulted in better water quality at a particular location in the Delta. This is
23 consistent with the State Water Board's reasoning provided in its July 3, 2015 order
24 conditionally approving the joint DWR and Reclamation Petition for Temporary Urgency
25 Change (TUCP):

26 Riparian and appropriative water right holders with rights to divert water below
27 Project reservoirs only are entitled to divert natural and abandoned flows, and
28 in the case of riparians only natural flows; they are not entitled to divert water

(21)

1 previously stored or imported by the Projects that is released for use
2 downstream, including stored water that is released for purposes of meeting
3 water quality objectives. [See *id.* at pp. 738, 743, 771.] Similarly, water right
4 holders only are entitled to the natural flows necessary to provide adequate
5 water quality for their purposes of use; they are not entitled to have water
6 released from upstream storage in order to provide better water quality than
7 would exist under natural conditions, and they are not entitled to better water
8 quality than necessary to allow them to use the water to which they are
9 entitled. [See *Wright v. Best* (1942) 19 Cal.2d 368, 378-379; see also *Deetz v.*
10 *Carter* (1965) 232 Cal.App.2d 851, 856.]

11 [State Water Board 7-3-2015³.]

12 As was discussed in Section IV.2 above, during dry periods, Project operations
13 improve water quality in substantial portions of the Delta above what would exist absent the
14 Project releases. DWR and Reclamation provide storage releases during dry periods in
15 most years specifically for the purpose of maintaining water quality and flow objectives in
16 the Delta when natural flow is insufficient to meet the objectives. Term 91 was developed
17 to protect these SWP and CVP supplemental storage releases from diversion by other
18 parties. During the Term 91 period, water quality in substantial portions of the Delta would
19 continue to degrade in the absence of the Projects' upstream storage releases. These
20 supplemental releases protect water quality while providing an incidental benefit to
21 diverters in the Delta, but individual water right holders cannot require that this incidental
22 benefit continue.

23 ///

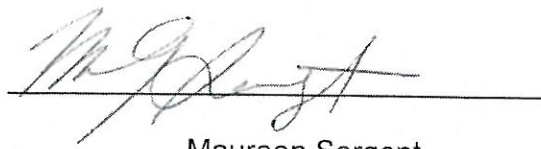
24 _____
25 ³ SWRCB Order Conditionally Approving a Petition for Temporary Urgency Changes in License and Permit
26 Terms and Conditions Requiring Compliance with Delta Water Quality Objectives in Response to Drought
27 Conditions, dated July 3, 2015; The petition was filed for Permits 16478, 16479, 16481, 16482 and 16483
28 (Applications 5630, 14443, 14445A, 17512 and 17514A, respectively) of the DWR for the SWP and License
1986 and Permits 11315, 11316, 11885, 11886, 11887, 11967, 11968, 11969, 11970, 11971, 11972, 11973,
12364, 12721, 12722, 12723, 12725, 12726, 12727, 12860, 15735, 16597, 20245, and 16600 (Applications
23, 234, 1465, 5638, 13370, 13371, 5628, 15374, 15375, 15376, 16767, 16768, 17374, 17376, 5626, 9363,
9364, 9366, 9367, 9368, 15764, 22316, 14858A, 14858B, and 19304, respectively) of Reclamation for the
CVP

1 **V. CONCLUSION**

2 The CWF Petition is limited to a request to add three new points of
3 diversion/rediversion to the listed DWR and Reclamation water rights. The currently
4 authorized rate of diversion, season of diversion and place and purpose of use will remain
5 unchanged. The petition is consistent with CWC Section 1701. Information provided by
6 DWR supports a decision by the State Water Board that the petition will not in effect initiate
7 a new water right, the permits have not expired, and the operation of the CWF facilities will
8 not injure other legal users of water.

9 The SWP will continue to meet its contractual obligations which are protective of the
10 Feather River Settlement Contractors as well as those diverters with settlement
11 agreements in the Delta. In managing the SWP to provide water to its contractors, DWR
12 operates its facilities to meet all statutory and regulatory requirements imposed on the SWP
13 prior to satisfying delivery obligations. These requirements include those imposed by the
14 State Water Board on the SWP water rights in D-1641, including water quality objectives
15 and diversion limits, as well as the requirements contained in the 2008 U.S. Fish and
16 Wildlife Service Biological Opinion for the protection of Delta Smelt, the 2009 National
17 Marine Fisheries Service Biological Opinion for the protection of anadromous fish species ,
18 and the California Department of Fish and Wildlife Incidental Take Permit for long-fin smelt.
19 [Exhibits SWRCB-87, SWRCB-84, and SWRCB-65.], These existing protections will
20 remain in effect. In addition, no water will be diverted at the CWF facilities prior to receiving
21 a Biological Opinion and an Incidental Take Permit for CWF and an order from the State
22 Water Board approving the Petition.

Executed on this 22nd day of March , 2017 in Sacramento, California.

A handwritten signature in dark ink, appearing to read "Maureen Sergent", is written over a horizontal line.

Maureen Sergent

24

TESTIMONY OF MAUREEN SERGENT